## Claims (Including Amendments)

1. (currently amended) A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$\mathbb{R}^{x}$$
 $\mathbb{R}^{x}$ 
 $\mathbb{E}^{1}-\mathbb{E}^{2}-\mathbb{E}^{3}$ 

HO  $\mathbb{R}^{x}$  or hydrogen

 $\mathbb{E}^{1}-\mathbb{E}^{2}-\mathbb{E}^{3}$  (1-1); and

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected R<sup>x</sup> substituents, or

A¹ and A² are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkynyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthio, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl,

carbocyclylalkyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of:

nitrogen, and carbon bonded to hydrogen, and carbon bonded to R<sup>x</sup>; and

E<sup>1</sup> is heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

 $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy,

thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, hydroxyimino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

2. (original) A compound or salt thereof according to claim 1, wherein the compound corresponds in structure to the following formula:

$$\mathbb{H} \circ \mathbb{N} \longrightarrow \mathbb{E}^{1} - \mathbb{E}^{2} - \mathbb{E}^{3} \quad (2-1).$$

3. (original) A compound or salt thereof according to claim 2, wherein the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $R^x$   $E^1-E^2-E^3$  (3-1).

4. (original) A compound or salt thereof according to claim 3, wherein the compound corresponds in structure to the following formula:

HO N O O O O 
$$E^1-E^2-E^3$$
 (4-1).

5. (original) A compound or salt thereof according to claim 4, wherein the compound corresponds in structure to the following formula:

6. **(original)** A compound or salt thereof according to claim 3, wherein: the compound corresponds in structure to the following formula:

HO 
$$R^{x'}$$
 $E^1-E^2-E^3$  (6-1), and

Rx' is halogen.

7. (original) A compound or salt thereof according to claim 6, wherein the compound corresponds in structure to the following formula:

- 8. (original) A compound or salt thereof according to claim 2, wherein Y is nitrogen.
- 9. (original) A compound or salt thereof according to claim 2, wherein Y is carbon bonded to hydrogen.
  - 10. (original) A compound or salt thereof according to claim 2, wherein  $E^2$  is a bond.
- 11. (original) A compound or salt thereof according to claim 2, wherein A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclylalkyl, carbocyclylalkenyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkylthio, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkylthio, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents.

12. (original) A compound or salt thereof according to claim 11, wherein the compound corresponds in structure to a formula selected from the group consisting of:

HO 
$$H_{3C}$$
 CH<sub>3</sub>  $H_{3C}$   $H_{3C}$ 

13. (original) A compound or salt thereof according to claim 11, wherein the compound corresponds in structure to the following formula:

14. (original) A compound or salt thereof according to claim 11, wherein the compound corresponds in structure to the following formula:

15. (original) A compound or salt thereof according to claim 2, wherein  $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein: the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\rm X}$  substituents.

16. (original) A compound or salt thereof according to claim 15, wherein the compound corresponds in structure to a formula selected from the group consisting of:

17. (original) A compound or salt thereof according to claim 15, wherein the compound corresponds in structure to the following formula:

18. (original) A compound or salt thereof according to claim 15, wherein the compound corresponds in structure to the following formula:

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19. (original) A compound or salt thereof according to claim 15, wherein: the compound corresponds in structure to the following formula:

HO N 
$$E^1-E^2-E^3$$
 (19-1); and

A is selected from the group consisting of -O-, -N(H)-, -N( $\mathbb{R}^{x}$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl.

20. (currently amended) A compound or salt thereof according to claim 19, wherein E<sup>1</sup> is selected from the group consisting of pyrazinyl, pyrimidinyl, pyridazinyl, furanyl, thienyl, pyrrolyl, imidazolyl, pyrazolyl, triazolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, thiodiazolyl, oxadiazolyl, oxadiazolyl, pyranyl, pyridinyl, triazinyl, tetrazolyl, oxazinyl, azepinyl, and diazepinyl, wherein:

each such substituent is optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, thioxo, and imino.

- 21. **(original)** A compound or salt thereof according to claim 20, wherein E<sup>1</sup> is selected from the group consisting of pyrazinyl, pyrimidinyl, pyridazinyl, furanyl, thienyl, pyrrolyl, imidazolyl, pyrazolyl, triazolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, thiodiazolyl, oxathiazolyl, oxadiazolyl, oxathiolyl, pyranyl, pyridinyl, diazinyl, triazinyl, oxazinyl, azepinyl, and diazepinyl.
  - 22. (original) A compound or salt thereof according to claim 21, wherein E<sup>1</sup> is thienyl.
- 23. (original) A compound or salt thereof according to claim 22, wherein the compound corresponds in structure to a formula selected from the group consisting of:

24. (original) A compound or salt thereof according to claim 21, wherein  $E^1$  is thiazolyl.

25. (original) A compound or salt thereof according to claim 24, wherein the compound corresponds in structure to a formula selected from the group consisting of:

HO 
$$_{\rm H}$$
  $_{\rm CH_3}$  and  $_{\rm H_3C}$   $_{\rm CH_3}$   $_{\rm CH_3}$   $_{\rm CH_3}$   $_{\rm CH_3}$ 

- 26. (original) A compound or salt thereof according to claim 21, wherein E<sup>1</sup> is pyridinyl.
- 27. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to a formula selected from the group consisting of:

28. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to a formula selected from the group consisting of:

29. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to a formula selected from the group consisting of:

HO 
$$_{H}$$
  $_{F}$   $_{F}$   $_{F}$   $_{CF_{3}}$   $_{CH_{3}}$   $_{CH_{3}}$ 

30. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to the following formula:

31. **(original)** A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to the following formula:

32. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to the following formula:

33. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to the following formula:

34. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to the following formula:

35. (original) A compound or salt thereof according to claim 26, wherein the compound corresponds in structure to the following formula:

36. (original) A compound or salt thereof according to claim 21, wherein E<sup>1</sup> is pyrazinyl.

37. (original) A compound or salt thereof according to claim 36, wherein the compound corresponds in structure to the following formula:

38. (original) A compound or salt thereof according to claim 36, wherein the compound corresponds in structure to a formula selected from the group consisting of:

39. (original) A compound or salt thereof according to claim 36, wherein the compound corresponds in structure to the following formula:

40. (original) A compound or salt thereof according to claim 36, wherein the compound corresponds in structure to the following formula:

- 41. (original) A compound or salt thereof according to claim 21, wherein E<sup>1</sup> is pyrimidinyl.
- 42. (original) A compound or salt thereof according to claim 41, wherein the compound corresponds in structure to the following formula:

43. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$\mathbb{R}^1$$
  $\mathbb{R}^2$   $\mathbb{R}^1$   $\mathbb{R}^2$   $\mathbb{R}^3$  (43-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\chi}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkenyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkylthio, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkenyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkylthio, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\chi}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

E<sup>1</sup> is heterocyclyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, oxo, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

 $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

44. (original) A compound or salt thereof according to claim 43, wherein the compound corresponds in structure to a formula selected from the group consisting of:

45. (original) A compound or salt thereof according to claim 43, wherein E<sup>1</sup> is heterocyclyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

46. (original) A compound or salt thereof according to claim 45, wherein  $E^3$  is selected from the group consisting of hydrogen, halogen, cyano,  $C_1$ - $C_9$ -alkyl,  $C_1$ - $C_9$ -alkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_3$ - $C_6$ -cycloalkyl- $C_1$ - $C_6$ -alkyl, phenyl,  $C_1$ - $C_6$ -alkylphenyl,

 $C_1$ - $C_6$ -alkoxyphenyl, phenyl- $C_1$ - $C_6$ -alkyl, heterocyclyl- $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkylheterocyclyl, and  $C_1$ - $C_6$ -alkoxyheterocyclyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and cyano, and any heterocyclyl of E<sup>3</sup> has 5 to 10 ring members, and is optionally substituted with up to 2 oxo.

47. (original) A compound or salt thereof according to claim 46, wherein  $-E^2-E^3$  is selected from the group consisting of hydrogen, halogen,  $C_1-C_9$ -alkyl,  $C_1-C_4$ -alkoxy, methoxymethoxy, butoxy, butylamino, phenyl, methylphenyl, methoxyphenyl, phenylmethoxy, and phthalimidylbutyl, wherein:

any member of such group optionally is substituted with one or more fluoro.

48. **(original)** A compound or salt thereof according to claim 45, wherein each R<sup>x</sup> is independently selected from the group consisting of aldehydo, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-alkynyl, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, C<sub>3</sub>-C<sub>6</sub>-alkenyloxycarbonyl, C<sub>3</sub>-C<sub>6</sub>-alkynyloxycarbonyl, amino, amino-C<sub>1</sub>-C<sub>6</sub>-alkyl, aminocarbonyl, amino-C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl, amino(thiocarbonyl), aminosulfonyl, C<sub>1</sub>-C<sub>6</sub>-alkylaminocarbonyl, C<sub>3</sub>-cycloalkyl, C<sub>3</sub>-cycloalkyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-cycloalkyl, phenylcarbonyl, phenylsulfonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxyphenyl, heterocyclyl, heterocyclyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, heterocyclylcarbonyl, heterocyclylsulfonyl, and C<sub>1</sub>-C<sub>6</sub>-alkoxyheterocyclyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen,

any amino of  $R^x$  optionally is substituted with up to 2 independently selected  $C_1$ - $C_6$ -alkyl, and

any heterocyclyl of  $R^x$  has 5 to 10 ring members, and optionally is substituted with up to 2 oxo.

- 49. (original) A compound or salt thereof according to claim 48, wherein R<sup>x</sup> is selected from the group consisting of butyl, methoxyethyl, cyclopropyl, methylphenyl, phenylmethyl, pyridinyl, pyrimidinyl, and pyridinylmethyl.
- 50. (original) A compound or salt thereof according to claim 49, wherein R<sup>x</sup> is selected from the group consisting of 2-methoxyethyl, pyridinyl, and pyrimidinyl.
- 51. (original) A compound or salt thereof according to claim 45, wherein the compound corresponds in structure to the following formula:

HO N 
$$E^1-E^2-E^3$$
 (51-1).

- 52. (original) A compound or salt thereof according to claim 51, wherein A<sup>1</sup> is alkyl.
- 53. (original) A compound or salt thereof according to claim 52, wherein the compound corresponds in structure to the following formula:

- 54. (original) A compound or salt thereof according to claim 45, wherein A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form cycloalkyl optionally substituted with up to 3 independently selected R<sup>X</sup> substituents.
- 55. (original) A compound or salt thereof according to claim 54, wherein  $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form cyclopentyl.

56. (original) A compound or salt thereof according to claim 55, wherein the compound corresponds in structure to the following formula:

- 57. (original) A compound or salt thereof according to claim 54, wherein  $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form cyclohexyl.
- 58. (original) A compound or salt thereof according to claim 57, wherein the compound corresponds in structure to a formula selected from the group consisting of:

HO N HO N HO N HO N HO CH<sub>3</sub> and 
$$(58-2)$$
.

- 59. (original) A compound or salt thereof according to claim 45, wherein A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form cycloalkenyl optionally substituted with up to 3 independently selected R<sup>x</sup> substituents.
- 60. (original) A compound or salt thereof according to claim 59, wherein the compound corresponds in structure to the following formula:

61. **(original)** A compound or salt thereof according to claim 45, wherein: the compound corresponds in structure to the following formula:

HO N 
$$E^{1}-E^{2}-E^{3}$$
 (61-1); and

A is selected from the group consisting of -O-, -N(H)-, -N( $\mathbb{R}^{x}$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>X</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl.

62. (currently amended) A compound or salt thereof according to claim 61, wherein E<sup>1</sup> is selected from the group consisting of pyrazinyl, pyrimidinyl, pyridazinyl, furanyl, tetrahydropyranyl, dihydrofuranyl, tetrahydrofuranyl, thienyl, dihydrothienyl, tetrahydrothienyl, pyrrolyl, pyrrolinyl, pyrrolidinyl, imidazolyl, imidazolinyl, imidazolidinyl, pyrazolyl, pyrazolinyl, pyrazolidinyl, triazolyl, tetrazolyl, oxazolyl, isoxazolyl, oxazolidinyl, isoxazolidinyl, thiazolyl, isothiazolyl, isothiazolyl, isothiazolyl, oxathiazolyl, oxathiazolyl, oxathiazolyl, oxathiazolyl, oxathiolyl, oxathiolyl, pyranyl, dihydropyranyl, pyridinyl, piperidinyl, piperazinyl, triazinyl, oxazinyl, morpholinyl, azepinyl, diazepinyl, indolizinyl, pyrindinyl, pyranopyrrolyl, 4H-quinolizinyl, purinyl, naphthyridinyl, pyridopyridinyl, pteridinyl, indolyl, isoindolyl, indoleninyl, isoindazolyl, benzazinyl,

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phthalazinyl, quinoxalinyl, quinazolinyl, benzodiazinyl, benzopyranyl, benzothiopyranyl, benzoxazolyl, indoxazinyl, anthranilyl, benzodioxolyl, benzodioxanyl, benzoxadiazolyl, benzofuranyl, isobenzofuranyl, isobenzothienyl, isobenzothienyl, benzothiazolyl, benzothiadiazolyl, benzimidazolyl, benzotriazolyl, benzoxazinyl, benzisoxazinyl, tetrahydroisoquinolinyl, carbazolyl, xanthenyl, and acridinyl, wherein:

any member of such group is optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, oxo, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, thioxo, and imino.

63. (original) A compound or salt thereof according to claim 62, wherein E<sup>1</sup> is heterocycloalkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, oxo, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

64. (original) A compound or salt thereof according to claim 62, wherein E<sup>1</sup> is heterocycloalkenyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, oxo, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

65. (original) A compound or salt thereof according to claim 64, wherein the compound corresponds in structure to the following formula:

66. (original) A compound or salt thereof according to claim 62, wherein E<sup>1</sup> is heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

67. (original) A compound or salt thereof according to claim 66, wherein E<sup>1</sup> is 5-member heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

68. (original) A compound or salt thereof according to claim 67, wherein E<sup>1</sup> is thiazolyl.

69. (original) A compound or salt thereof according to claim 68, wherein the compound corresponds in structure to a formula selected from the group consisting of:

70. (original) A compound or salt thereof according to claim 68, wherein the compound corresponds in structure to a formula selected from the group consisting of:

71. (original) A compound or salt thereof according to claim 68, wherein the compound corresponds in structure to a formula selected from the group consisting of:

- 72. (original) A compound or salt thereof according to claim 67, wherein E<sup>1</sup> is selected from the group consisting of oxadiazolyl and thiodiazolyl.
- 73. (original) A compound or salt thereof according to claim 72, wherein the compound corresponds in structure to a formula selected from the group consisting of:

74. (original) A compound or salt thereof according to claim 66, wherein E<sup>1</sup> is a 6-member heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

75. (original) A compound or salt thereof according to claim 74, wherein E<sup>1</sup> is pyridinyl.

76. (original) A compound or salt thereof according to claim 75, wherein the compound corresponds in structure to a formula selected from the group consisting of:

$$HO_{H}$$
 $HO_{H}$ 
 $H$ 

77. (original) A compound or salt thereof according to claim 75, wherein the compound corresponds in structure to a formula selected from the group consisting of:

78. (original) A compound or salt thereof according to claim 75, wherein the compound corresponds in structure to the following formula:

79. (original) A compound or salt thereof according to claim 75, wherein the compound corresponds in structure to a formula selected from the group consisting of:

80. (original) A compound or salt thereof according to claim 74, wherein E<sup>1</sup> is pyrazinyl.

81. (original) A compound or salt thereof according to claim 80, wherein the compound corresponds in structure to a formula selected from the group consisting of:

82. (original) A compound or salt thereof according to claim 80, wherein the compound corresponds in structure to the following formula:

83. (original) A compound or salt thereof according to claim 80, wherein the compound corresponds in structure to the following formula:

84. (original) A compound or salt thereof according to claim 80, wherein the compound corresponds in structure to the following formula:

85. (original) A compound or salt thereof according to claim 74, wherein E<sup>1</sup> is pyrimidinyl.

86. (original) A compound or salt thereof according to claim 85, wherein the compound corresponds in structure to a formula selected from the group consisting of:

87. **(original)** A compound or salt thereof according to claim 85, wherein the compound corresponds in structure to the following formula:

88. (original) A compound or salt thereof according to claim 85, wherein the compound corresponds in structure to the following formula:

89. (original) A compound or salt thereof according to claim 85, wherein the compound corresponds in structure to a formula selected from the group consisting of:

- 90. (original) A compound or salt thereof according to claim 74, wherein E<sup>1</sup> is pyridazinyl.
- 91. (original) A compound or salt thereof according to claim 90, wherein the compound corresponds in structure to a formula selected from the group consisting of:

92. (original) A compound or salt thereof according to claim 90, wherein the compound corresponds in structure to the following formula:

93. (original) A compound or salt thereof according to claim 66, wherein E<sup>1</sup> is a multi-ring heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

94. (original) A compound or salt thereof according to claim 93, wherein the compound corresponds in structure to the following formula:

## 95. (original) A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $Z^1$   $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^4$  (95-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkenyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclyloxy, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen or carbon bonded to hydrogen; and E<sup>2</sup> is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, and alkoxyalkylthioalkyl, wherein:

each member of such group is partially substituted with one or more independently selected halogen; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkenyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclyloxyalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

96. (currently amended) A compound or salt thereof according to claim 95, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

each member of such group is <u>partially</u> substituted with one or more independently selected halogen.

97. (original) A compound or salt thereof according to claim 96, wherein the compound corresponds in structure to the following formula:

98. (original) A compound or salt thereof according to claim 96, wherein the compound corresponds in structure to the following formula:

99. (original) A compound or salt thereof according to claim 95, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

each such substituent is substituted with trihalomethyl.

100. (original) A compound or salt thereof according to claim 95, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of haloalkyl, haloalkoxy, halo-substituted alkoxyalkyl, and halo-substituted alkoxyalkoxy, wherein:

each member of such group is substituted with trihalomethyl.

- 101. (original) A compound or salt thereof according to claim 95, wherein E<sup>3</sup> comprises a carbon bonded to at least one halo and at least one hydrogen.
- 102. (currently amended) A compound or salt thereof according to claim 95, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

each member of such group is <u>partially</u> substituted with one or more halogen independently selected from the group consisting of chloro and fluoro.

103. (original) A compound or salt thereof according to claim 95, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of haloalkyl, haloalkoxy, halo-substituted alkoxyalkyl, and halo-substituted alkoxyalkoxy, wherein:

each member of such group is substituted with trifluoromethyl.

104. **(original)** A compound or salt thereof according to claim 95, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$  (104-1); and

A is selected from the group consisting of -O-, -N(H)-, -N( $\mathbb{R}^{x}$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

105. (currently amended) A compound or salt thereof according to claim 104, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

each member of such group is partially substituted with one or more fluoro.

- 106. (original) A compound or salt thereof according to claim 104, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein: each member of such group is substituted with trifluoromethyl.
- 107. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to a formula selected from the group consisting of:

(107-15),

 $\mathbf{H}$ 

(107-18), and

108. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to the following formula:

109. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to the following formula:

110. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to the following formula:

111. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to the following formula:

112. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to the following formula:

113. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to the following formula:

114. (original) A compound or salt thereof according to claim 106, wherein the compound corresponds in structure to the following formula:

115. (original) A compound or salt thereof according to claim 104, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of fluoroalkyl, fluoroalkoxy, fluoro-substituted alkoxyalkyl, and fluoro-substituted alkoxyalkoxy, wherein:

each member of such group is substituted with trifluoromethyl.

116. (original) A compound or salt thereof according to claim 115, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

117. (original) A compound or salt thereof according to claim 115, wherein the compound corresponds in structure to the following formula:

118. (original) A compound or salt thereof according to claim 115, wherein the compound corresponds in structure to the following formula:

119. (original) A compound or salt thereof according to claim 115, wherein the compound corresponds in structure to the following formula:

120. (original) A compound or salt thereof according to claim 115, wherein the compound corresponds in structure to the following formula:

121. (original) A compound or salt thereof according to claim 104, wherein E<sup>3</sup> comprises a carbon bonded to at least one fluoro and at least one hydrogen.

122. **(original)** A compound or salt thereof according to claim 121, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

HO, 
$$H$$
 (122-1),  $H$  (122-2),  $H$  (122-2),  $H$  (122-2),  $H$  (122-3),  $H$  (122-4),  $H$  (122-6),  $H$  (122-5),  $H$  (122-6),  $H$  (122-7), and  $H$  (122-8).

123. (original) A compound or salt thereof according to claim 121, wherein the compound corresponds in structure to the following formula:

124. (original) A compound or salt thereof according to claim 121, wherein the compound corresponds in structure to the following formula:

125. (original) A compound or salt thereof according to claim 121, wherein the compound corresponds in structure to the following formula:

## 126. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $Z^1$   $Z^2$   $Z^3$   $Z^4$   $Z^2$  (126-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected as follows:

A<sup>1</sup> is selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkylthio, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents, and

A<sup>2</sup> is selected from the group consisting of alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkenyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkylthio, carbocyclylalkyl, carbocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkoxyalkyl,

heterocyclylalkylthio, heterocyclylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected R<sup>X</sup> substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen and a carbon bonded to hydrogen; and  $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to

two substituents independently selected from alkyl and carbocyclylalkyl, alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$  and  $Z^3$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

 $Z^2$  and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

the alkoxyalkyl, alkylthio, mono-alkylamino, and di-alkylamino optionally are substituted with one or more substituents independently selected from the group

consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

the alkyl and alkoxy comprise at least two carbons and/or are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

127. **(original)** A compound or salt thereof according to claim 126, wherein A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkenyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkylthio, carbocyclylalkyl, carbocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthio, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected R<sup>X</sup> substituents.

128. **(original)** A compound or salt thereof according to claim 126, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$  (128-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>X</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

129. (original) A compound or salt thereof according to claim 128, wherein E<sup>3</sup> is selected from the group consisting of carbocyclyl and carbocyclylalkyl, wherein:

the carbocyclyl and carbocyclylalkyl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino.

130. (original) A compound or salt thereof according to claim 129, wherein E<sup>3</sup> is selected from the group consisting of cycloalkyl and cycloalkylalkyl, wherein:

the cycloalkyl and cycloalkylalkyl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen,

hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino.

131. (original) A compound or salt thereof according to claim 130, wherein the compound corresponds in structure to a formula selected from the group consisting of:

132. (original) A compound or salt thereof according to claim 129, wherein E<sup>3</sup> is selected from the group consisting of aryl and arylalkyl, wherein:

the aryl and arylalkyl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino.

133. (original) A compound or salt thereof according to claim 132, wherein the compound corresponds in structure to a formula selected from the group consisting of:

134. (original) A compound or salt thereof according to claim 126, wherein E<sup>3</sup> is selected from the group consisting of heteroaryl and heteroarylalkyl, wherein:

the heteroaryl and heteroarylalkyl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally

substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino.

135. (original) A compound or salt thereof according to claim 134, wherein the compound corresponds in structure to the following formula:

136. (original) A compound or salt thereof according to claim 134, wherein the compound corresponds in structure to a formula selected from the group consisting of:

HO N 
$$\sim$$
 CF<sub>3</sub> HO N  $\sim$  CH<sub>3</sub> (136-5), and (136-6).

137. (original) A compound or salt thereof according to claim 126, wherein E<sup>3</sup> is selected from the group consisting of heterocycloalkyl and heterocycloalkylalkyl, wherein:

the heterocycloalkyl and heterocycloalkylalkyl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino.

138. (original) A compound or salt thereof according to claim 137, wherein the compound corresponds in structure to a formula selected from the group consisting of:

(138-1).

139. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^2$  (139-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3  $independently \ selected \ R^X \ substituents; \ and$ 

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkoxyl, alkoxyl, alkoxylkyl, alkox

heterocyclyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen and carbon bonded to hydrogen; and  $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, and alkoxyalkylthioalkyl, wherein:

the alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkoxyalkyl, and alkoxyalkylthioalkyl are substituted with one or more cyano; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

- 140. (original) A compound or salt thereof according to claim 139, wherein E<sup>2</sup> is a bond.
  - 141. (original) A compound or salt thereof according to claim 139, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^2$   $Z^4$  (141-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^{x}$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>X</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino,

carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

- 142. (original) A compound or salt thereof according to claim 141, wherein -E<sup>2</sup>-E<sup>3</sup> is cyanoaryl.
- 143. **(original)** A compound or salt thereof according to claim 142, wherein the compound corresponds in structure to the following formula:

- 144. (original) A compound or salt thereof according to claim 141, wherein  $-E^2-E^3$  is cyano.
- 145. (original) A compound or salt thereof according to claim 144, wherein the compound corresponds in structure to the following formula:

146. (original) A compound or salt thereof according to claim 144, wherein the compound corresponds in structure to the following formula:

- 147. (original) A compound or salt thereof according to claim 141, wherein E<sup>3</sup> is cyanoalkyl.
- 148. (original) A compound or salt thereof according to claim 147, wherein the compound corresponds in structure to a formula selected from the group consisting of:

## 149. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$  (149-1); and

R<sup>X</sup> is selected from the group consisting of R<sup>c</sup>-oxyalkyl, R<sup>c</sup>R<sup>c</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, and carbocyclylsulfonyl, wherein:

the carbocyclyl and the carbocyclyl of the carbocyclylalkyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, and carbocyclylsulfonyl are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen and carbon bonded to hydrogen; and  $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy,

thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such gruop optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and each R<sup>c</sup> is independently selected from the group consisting of carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, and carbocyclylsulfonylalkyl, wherein:

the carbocyclyl and the carbocyclyl of the carbocyclylalkyl, carbocyclyloxyalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkenyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, and carbocyclylsulfonylalkyl are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

 $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

150. (original) A compound or salt thereof according to claim 149, wherein:

R<sup>X</sup> is selected from the group consisting of R<sup>c</sup>-oxyalkyl, R<sup>c</sup>R<sup>c</sup>-aminoalkyl, phenyl, phenylalkyl, and phenylsulfonyl, wherein:

the phenyl and the phenyl of the phenylalkyl, phenyloxy, phenyloxyalkoxy, phenylthio, and phenylsulfonyl are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

each R<sup>c</sup> is independently selected from the group consisting of phenyl, phenylalkyl, phenylalkyl, phenylalkyl, phenylthioalkyl, phenylthioalkyl, phenylsulfoxidoalkyl, phenylsulfonyl, and phenylsulfonylalkyl, wherein:

the phenyl and the phenyl of the phenylalkyl, phenyloxyalkyl, phenylalkoxyalkyl, phenylthioalkyl, phenylthioalkenyl, phenylsulfoxidoalkyl, phenylsulfonyl, and phenylsulfonylalkyl are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, and nitroso.

151. (original) A compound or salt thereof according to claim 150, wherein R<sup>x</sup> is phenyl substituted with one or more substituents independently selected from the group

consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkoxy- $C_1$ - $C_6$ -alkoxy- $C_1$ - $C_6$ -alkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and the amino optionally is substituted with up to 2 independently selected  $C_1$ - $C_6$ -alkyl.

152. **(original)** A compound or salt thereof according to claim 151, wherein R<sup>x</sup> is phenyl substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, C<sub>1</sub>-C<sub>2</sub>-alkyl, C<sub>1</sub>-C<sub>2</sub>-alkoxy, C<sub>1</sub>-C<sub>2</sub>-alkoxy-C<sub>1</sub>-C<sub>2</sub>-alkoxy-C<sub>1</sub>-C<sub>2</sub>-alkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and the amino optionally is substituted with up to 2 independently selected  $C_1$ - $C_2$ -alkyl.

153. (original) A compound or salt thereof according to claim 152, wherein the compound corresponds in structure to a formula selected from the group consisting of:

## 154. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^4$   $Z^2$  (154-1); and

 $R^{x1}$  is selected from the group consisting of -C(O)-, -C(S)-, -C(NR<sup>b</sup>)-, and -S(O)<sub>2</sub>-; and

R<sup>b</sup> is selected from the group consisting of hydrogen and hydroxy; and

R<sup>x2</sup> is selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, heterocyclyl, heterocyclylakyl, heterocyclyloxy, and heterocyclyloxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy; and

Y is selected from the group consisting of nitrogen and carbon bonded to hydrogen; and  $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

155. (original) A compound or salt thereof according to claim 154, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of n-pentyl and n-butoxy, wherein:

the n-pentyl and n-butoxy optionally are substituted with one or more fluoro.

156. (original) A compound or salt thereof according to claim 154, wherein R<sup>x2</sup> is selected from the group consisting of hydrogen, amino, alkyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, alkenyloxy, alkynyloxy, aminoalkyl, cycloalkyl, aryl, heterocycloalkyl, and heteroaryl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, oxo, hydroxy, and alkyl, and

the amino optionally is substituted with up to two substituents independently selected from the group consisting of alkyl and alkoxyalkyl.

157. (original) A compound or salt thereof according to claim 156, wherein the compound corresponds in structure to the following formula:

HO N 
$$E^2$$
- $E^3$  (157-1).

158. (original) A compound or salt thereof according to claim 157, wherein the compound corresponds in structure to a formula selected from the group consisting of:

- 159. (original) A compound or salt thereof according to claim 157, wherein  $R^{x2}$  is heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, oxo, hydroxy, and alkyl.
- 160. (original) A compound or salt thereof according to claim 159, wherein the compound corresponds in structure to the following formula:

161. (original) A compound or salt thereof according to claim 156, wherein the compound corresponds in structure to the following formula:

HO N S N 
$$E^2-E^3$$
 (161-1).

162. (original) A compound or salt thereof according to claim 161, wherein the compound corresponds in structure to the following formula:

163. (original) A compound or salt thereof according to claim 156, wherein the compound corresponds in structure to the following formula:

HO N 
$$R^{b}$$
  $R^{x2}$   $E^{2}$   $E^{3}$  (163-1).

164. **(original)** A compound or salt thereof according to claim 163, wherein the compound corresponds in structure to the following formula:

165. (original) A compound or salt thereof according to claim 156, wherein the compound corresponds in structure to the following formula:

HO N 
$$E^2-E^3$$
 (165-1).

166. (original) A compound or salt thereof according to claim 165, wherein the compound corresponds in structure to a formula selected from the group consisting of:

167. (original) A compound or salt thereof according to claim 156, wherein R<sup>x2</sup> is selected from the group consisting of cycloalkyl and aryl, wherein:

the cycloalkyl and aryl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, oxo, hydroxy, and alkyl.

168. (original) A compound or salt thereof according to claim 167, wherein the compound corresponds in structure to a formula selected from the group consisting of:

169. (original) A compound or salt thereof according to claim 156, wherein  $R^{x2}$  is selected from the group consisting of heterocycloalkyl and heteroaryl, wherein:

the heterocycloalkyl and heteroaryl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, oxo, hydroxy, and alkyl.

170. **(original)** A compound or salt thereof according to claim 169, wherein the compound corresponds in structure to a formula selected from the group consisting of:

171. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $A^2$   $A^2$   $A^3$   $A^2$   $A^3$   $A^2$   $A^3$   $A^3$ 

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

 $A^1$  and  $A^2$  are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkylthio, carbocyclylalkyl, carbocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl,

heterocyclylalkoxyalkyl, heterocyclylalkylthio, heterocyclylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

 $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to

two substituents independently selected from alkyl and carbocyclylalkyl, alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1, Z^2, Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and at least one of  $Z^1$ ,  $Z^2$ ,  $Z^3$ ,  $Z^4$ , and  $-E^2-E^3$  is halogen.

172. (original) A compound or salt thereof according to claim 171, wherein E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, C<sub>1</sub>-C<sub>9</sub>-alkyl, C<sub>1</sub>-C<sub>9</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, phenyl,

 $C_1$ - $C_6$ -alkylphenyl,  $C_1$ - $C_6$ -alkoxyphenyl, phenyl- $C_1$ - $C_6$ -alkyl, heterocyclyl- $C_1$ - $C_6$ -alkylheterocyclyl, and  $C_1$ - $C_6$ -alkoxyheterocyclyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and cyano, and any heterocyclyl of E<sup>3</sup> has 5 to 10 ring members, and is optionally substituted with up to 2 oxo.

- 173. (original) A compound or salt thereof according to claim 172, wherein -E<sup>2</sup>-E<sup>3</sup> is selected from the group consisting of butyl, pentyl, ethoxy, propoxy, methoxyethoxy, cyclobutyloxy, butoxy, trifluoromethylpropoxy, cyclopropylmethoxy, and phenyl.
- 174. **(original)** A compound or salt thereof according to claim 171 wherein R<sup>x</sup> is selected from the group consisting of aldehydo, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-alkynyl, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, C<sub>3</sub>-C<sub>6</sub>-alkenyloxycarbonyl, C<sub>3</sub>-C<sub>6</sub>-alkynyloxycarbonyl, amino, amino-C<sub>1</sub>-C<sub>6</sub>-alkyl, aminocarbonyl, amino-C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl, amino(thiocarbonyl), aminosulfonyl, C<sub>1</sub>-C<sub>6</sub>-alkylaminocarbonyl, C<sub>3</sub>-cycloalkyl, C<sub>3</sub>-cycloalkyl, C<sub>3</sub>-cycloalkyl, phenyl, phenyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, phenylcarbonyl, phenylsulfonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxyphenyl, heterocyclyl, heterocyclyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, heterocyclylcarbonyl, heterocyclylsulfonyl, and C<sub>1</sub>-C<sub>6</sub>-alkoxyheterocyclyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen,

any amino of  $R^x$  optionally is substituted with up to 2 independently selected  $C_1\text{-}C_6\text{-alkyl}$ , and

any heterocyclyl of  $R^x$  has 5 to 10 ring members, and optionally is substituted with up to 2 oxo.

- 175. (original) A compound or salt thereof according to claim 174, wherein R<sup>x</sup> is selected from the group consisting of butyl, methoxyethyl, cyclopropyl, methylphenyl, phenylmethyl, pyridinyl, pyrimidinyl, and pyridinylmethyl.
- 176. (original) A compound or salt thereof according to claim 171, wherein -E<sup>2</sup>-E<sup>3</sup> is halogen.
- 177. (original) A compound or salt thereof according to claim 176, wherein the compound corresponds in structure to the following formula:

- 178. (original) A compound or salt thereof according to claim 171, wherein at least one of  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  is halogen.
- 179. (original) A compound or salt thereof according to claim 178, wherein  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of halogen and hydrogen.
- 180. (original) A compound or salt thereof according to claim 179, wherein  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of fluoro, chloro, and hydrogen.
- 181. (original) A compound or salt thereof according to claim 180, wherein  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of fluoro and hydrogen.
- 182. (original) A compound or salt thereof according to claim 179, wherein A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocycloalkyl optionally substituted with up to 3 independently selected R<sup>X</sup> substituents.

183. (original) A compound or salt thereof according to claim 182, wherein the compound corresponds in structure to the following formula:

184. **(original)** A compound or salt thereof according to claim 179, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$  (184-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

185. (original) A compound or salt thereof according to claim 184, wherein at least 2 of  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are hydrogen.

186. (original) A compound or salt thereof according to claim 185, wherein: three of  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are hydrogen; and one of  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  is halogen.

187. **(original)** A compound or salt thereof according to claim 186, wherein: the compound corresponds in structure to the following formula:

HO N 
$$\mathbb{Z}^1$$
  $\mathbb{E}^2 \cdot \mathbb{E}^3$  (187-1), and

 $Z^1$  is halogen.

188. (original) A compound or salt thereof according to claim 187, wherein the compound corresponds in structure to a formula selected from the group consisting of:

189. (original) A compound or salt thereof according to claim 187, wherein the compound corresponds in structure to the following formula:

190. (original) A compound or salt thereof according to claim 187, wherein the compound corresponds in structure to the following formula:

191. **(original)** A compound or salt thereof according to claim 186, wherein: the compound corresponds in structure to the following formula:

HO N 
$$E^2$$
- $E^3$  (191-1); and

 $Z^2$  is halogen.

192. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to a formula selected from the group consisting of:

193. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to a formula selected from the group consisting of:

194. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to a formula selected from the group consisting of:

195. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

196. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

197. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

198. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

199. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

200. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

201. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

202. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to a formula selected from the group consisting of:

203. (original) A compound or salt thereof according to claim 191, wherein the compound corresponds in structure to the following formula:

204. (original) A compound or salt thereof according to claim 185, wherein: two of  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are hydrogen; and two of  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are halogen.

205. **(original)** A compound or salt thereof according to claim 204, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $E^2$ - $E^3$  (205-1), and

 $Z^1$  and  $Z^2$  are independently selected halogen.

206. **(original)** A compound or salt thereof according to claim 204, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $E^2$ - $E^3$  (206-1), and

 $Z^1$  and  $Z^3$  are independently selected halogen.

207. (original) A compound or salt thereof according to claim 204, wherein: the compound corresponds in structure to the following formula:

HO N 
$$E^2-E^3$$
 (207-1), and

 $Z^2$  and  $Z^4$  are independently selected halogen.

208. (original) A compound or salt thereof according to claim 207, wherein the compound corresponds in structure to the following formula:

209. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $A^2$   $A^2$   $A^2$   $A^2$   $A^3$   $A^2$   $A^3$   $A^2$   $A^3$   $A^2$   $A^3$   $A^2$   $A^3$   $A^2$   $A^3$   $A^3$ 

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\rm X}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkynyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected R<sup>x</sup> substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

 $E^2$  is selected from the group consisting of -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, and -C(NOH)-; and

E<sup>3</sup> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, aminoalkyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen,

hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkynyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfonylalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1, Z^2, Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

210. **(original)** A compound or salt thereof according to claim 209, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$  (210-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>X</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

211. **(original)** A compound or salt thereof according to claim 210, wherein  $E^3$  is selected from the group consisting of hydrogen,  $C_1$ - $C_9$ -alkyl,  $C_1$ - $C_9$ -alkoxy- $C_1$ - $C_9$ -alkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_3$ - $C_6$ -cycloalkyl- $C_1$ - $C_6$ -alkyl, phenyl,  $C_1$ - $C_6$ -alkylphenyl,  $C_1$ - $C_6$ -alkoxyphenyl, phenyl- $C_1$ - $C_6$ -alkyl, heterocyclyl- $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkylpherocyclyl, and  $C_1$ - $C_6$ -alkoxyheterocyclyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and cyano, and any heterocyclyl of E<sup>3</sup> has 5 to 10 ring members, and is optionally substituted with up to 2 oxo.

212. (original) A compound or salt thereof according to claim 210, wherein E<sup>2</sup> is -S-.

213. (original) A compound or salt thereof according to claim 212, wherein the compound corresponds in structure to a formula selected from the group consisting of:

214. (original) A compound or salt thereof according to claim 210, wherein  $E^2$  is  $-S(O)_2$ -.

215. (original) A compound or salt thereof according to claim 214, wherein the compound corresponds in structure to the following formula:

216. (original) A compound or salt thereof according to claim 214, wherein the compound corresponds in structure to the following formula:

- 217. (original) A compound or salt thereof according to claim 210, wherein  $E^2$  is -C(O)-.
- 218. (original) A compound or salt thereof according to claim 217, wherein the compound corresponds in structure to a formula selected from the group consisting of:

- 219. (original) A compound or salt thereof according to claim 210, wherein  $E^2$  is  $-O-S(O)_2$ -.
- 220. (original) A compound or salt thereof according to claim 219, wherein the compound corresponds in structure to the following formula:

- 221. (original) A compound or salt thereof according to claim 210, wherein E<sup>2</sup> is -C(O)-N(H)-.
- 222. (original) A compound or salt thereof according to claim 221, wherein the compound corresponds in structure to the following formula:

## 223. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkenyl, heterocyclylalkynyl, heterocyclylalkylthioalkyl, heterocyclylalkylthio, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents; and

each R<sup>X</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

 $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of halogen, cyano, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl,

heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

- 224. (original) A compound or salt thereof according to claim 223 wherein E<sup>3</sup> is alkoxyalkyl.
- 225. (original) A compound or salt thereof according to claim 224, wherein -E<sup>2</sup>-E<sup>3</sup> is alkoxyalkyl.
- 226. (original) A compound or salt thereof according to claim 225, wherein the compound corresponds in structure to a formula selected from the group consisting of:

#### 227. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the a formula selected from the group consisting of:

HO N 
$$A^1A^2$$
  $Z^1$   $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^4$   $Z^2$   $Z^4$   $Z^2$   $Z^4$   $Z^2$   $Z^4$   $Z^4$   $Z^2$   $Z^4$   $Z^$ 

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkenyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, and Z<sup>4</sup> are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

228. **(original)** A compound or salt thereof according to claim 227, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $CH_3$   $Z^3$   $Z^4$   $(228-1)$ ; and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>X</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

229. (original) A compound or salt thereof according to claim 228, wherein the compound corresponds in structure to the following formula:

230. **(original)** A compound or salt thereof according to claim 227, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $CH_3$   $Z^3$   $Z^4$  (230-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

231. (original) A compound or salt thereof according to claim 230, wherein the compound corresponds in structure to the following formula:

# 232. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $Z^1$   $Z^2$   $Z^3$   $Z^4$  (232-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkenyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkynyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\chi}$  substituents; and

each R<sup>X</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and at least one of  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  is not hydrogen.

233. (original) A compound or salt thereof according to claim 232, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$  (233-1); and

A is selected from the group consisting of -O-, -N(H)-, -N( $\mathbb{R}^{x}$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>X</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

234. (original) A compound or salt thereof according to claim 233, wherein the compound corresponds in structure to the following formula:

(234-2), and

235. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^2$  (235-1); and

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form carbocyclyl optionally substituted with up to 3 independently selected  $R^\chi$  substituents; and

each R<sup>X</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl,

alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

 $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1, Z^2, Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

- 236. (original) A compound or salt thereof according to claim 235, wherein A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form cycloalkyl optionally substituted with up to 3 independently selected R<sup>x</sup> substituents.
- 237. (original) A compound or salt thereof according to claim 236, wherein the compound corresponds in structure to the following formula:

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238. (original) A compound or salt thereof according to claim 236, wherein the compound corresponds in structure to the following formula:

## 239. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$E^2$$
- $E^3$  (239-1); and

 $E^2 \text{ is selected from the group consisting of: -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R^a)-, -C(O)-N(R^a)-, -N(R^a)-C(O)-, -C(O)-N(R^a)-N(R^a)-C(O)-, -S-, -S(O)-, -S(O)_2-, -N(R^a)-S(O)_2-, -S(O)_2-N(R^a)-, -O-S(O)_2-, -S(O)_2-O-, -C(NH)-, and -C(NOH)-; and -C(NOH)-;$ 

E<sup>3</sup> is selected from the group consisting of alkyl and alkoxyalkyl; and each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclyloxyalkyl, heterocyclylalkoxyalkyl, heterocyclylthioalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

240. (original) A compound or salt thereof according to claim 239, wherein the compound corresponds in structure to a formula selected from the group consisting of:

241. (original) A compound or salt thereof according to claim 239, wherein the compound corresponds in structure to the following formula:

242. (original) A compound or salt thereof according to claim 239, wherein the compound corresponds in structure to the following formula:

243. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^2$  (243-1); and

A is selected from the group consisting of -S-, -S(O)-, and -S(O)2-; and

 $E^2$  is selected from the group consisting of: -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

244. (original) A compound or salt thereof according to claim 243, wherein A is -S-.

245. (original) A compound or salt thereof according to claim 244, wherein the compound corresponds in structure to the following formula:

246. (original) A compound or salt thereof according to claim 243, wherein A is -S(O)<sub>2</sub>-

247. (original) A compound or salt thereof according to claim 246, wherein the compound corresponds in structure to the following formula:

248. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$   $Z^2$  (248-1); and

R<sup>x</sup> is selected from the group consisting of R<sup>c</sup>-oxyalkyl, R<sup>c</sup>R<sup>c</sup>-aminoalkyl,

R<sup>c</sup>R<sup>c</sup>-aminosulfonyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

 $E^2$  is selected from the group consisting of: -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkylthioalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and each R<sup>c</sup> is independently selected from the group consisting of heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, and heterocyclylsulfonylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

 $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

249. (original) A compound or salt thereof according to claim 248, wherein R<sup>x</sup> is selected from the group consisting of heterocyclyl, heterocyclyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, heterocyclylcarbonyl, heterocyclylsulfonyl, and C<sub>1</sub>-C<sub>6</sub>-alkoxyheterocyclyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, oxo,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen,

any heterocyclyl of  $R^x$  has 5 to 10 ring members, and optionally is substituted with up to 2 oxo.

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250. (original) A compound or salt thereof according to claim 249, wherein R<sup>x</sup> is heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, C<sub>1</sub>-C<sub>6</sub>-alkyl, and C<sub>1</sub>-C<sub>6</sub>-alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen.

- 251. (original) A compound or salt thereof according to claim 250, wherein R<sup>x</sup> is a 5-member heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, C<sub>1</sub>-C<sub>6</sub>-alkyl, and C<sub>1</sub>-C<sub>6</sub>-alkoxy, wherein: the alkyl and alkoxy are optionally substituted with one or more independently selected halogen.
- 252. (original) A compound or salt thereof according to claim 251, wherein the compound corresponds in structure to a formula selected from the group consisting of:

253. (original) A compound or salt thereof according to claim 250, wherein R<sup>x</sup> is a 6-member heteroaryl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, C<sub>1</sub>-C<sub>6</sub>-alkyl, and C<sub>1</sub>-C<sub>6</sub>-alkoxy, wherein: the alkyl and alkoxy are optionally substituted with one or more independently

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen.

254. (original) A compound or salt thereof according to claim 253, wherein the heteroaryl of R<sup>x</sup> has 1 or 2 nitrogen ring members, with the remaining ring members being carbon.

255. (original) A compound or salt thereof according to claim 254, wherein the compound corresponds in structure to a formula selected from the group consisting of:

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256. (original) A compound or salt thereof according to claim 250, wherein R<sup>x</sup> is a 9- or 10-member heteroaryl optionally substituted with one or more substituents independently

selected from the group consisting of halogen, cyano, hydroxy, C<sub>1</sub>-C<sub>6</sub>-alkyl, and C<sub>1</sub>-C<sub>6</sub>-alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen.

257. (original) A compound or salt thereof according to claim 256, wherein the compound corresponds in structure to a formula selected from the group consisting of:

258. (original) A compound or salt thereof according to claim 249, wherein  $R^x$  is heterocycloalkylalkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, oxo,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen.

259. (original) A compound or salt thereof according to claim 258, wherein R<sup>x</sup> is heterocycloalkylalkyl optionally substituted with one or more substituents independently

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selected from the group consisting of halogen, cyano, hydroxy, oxo,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen, and

the heterocycloalkyl of the heterocycloalkylalkyl has 5 ring members.

260. (original) A compound or salt thereof according to claim 259, wherein the compound corresponds in structure to the following formula:

261. (original) A compound or salt thereof according to claim 258, wherein  $R^x$  is heterocycloalkylalkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, oxo,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen, and

the heterocycloalkyl of the heterocycloalkylalkyl has 6 ring members.

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262. (original) A compound or salt thereof according to claim 261, wherein the compound corresponds in structure to a formula selected from the group consisting of:

263. (original) A compound or salt thereof according to claim 249, wherein  $R^x$  is heteroarylalkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, oxo,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen, and

the heteroaryl of the heteroarylalkyl has 5 ring members.

264. (original) A compound or salt thereof according to claim 263, wherein the compound corresponds in structure to a formula selected from the group consisting of:

265. (original) A compound or salt thereof according to claim 249, wherein  $R^x$  is heteroarylalkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, oxo,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen, and

the heteroaryl of the heteroarylalkyl has 6 ring members.

266. (original) A compound or salt thereof according to claim 265, wherein the compound corresponds in structure to a formula selected from the group consisting of:

267. (original) A compound or salt thereof according to claim 249, wherein  $R^x$  is heteroarylalkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, cyano, hydroxy, oxo,  $C_1$ - $C_6$ -alkyl, and  $C_1$ - $C_6$ -alkoxy, wherein:

the alkyl and alkoxy are optionally substituted with one or more independently selected halogen, and

the heteroaryl of the heteroarylalkyl has from 9 to 10 ring members.

268. (original) A compound or salt thereof according to claim 267, wherein the compound corresponds in structure to a formula selected from the group consisting of:

#### 269. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to a formula selected from the group consisting of:

HO N 
$$Z^1$$
  $Z^1$   $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^2$   $Z^4$   $Z^2$   $Z^4$   $Z^2$   $Z^2$   $Z^4$   $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^4$   $Z^5$   $Z^6$   $Z^6$ 

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, R<sup>c</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, cycloalkylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

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and

the amino optionally is substituted by up to 2 independently selected alkyl;

 $E^2$  is selected from the group consisting of: -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkyl, alkoxyalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and R<sup>c</sup> is selected from the group consisting of hydrogen, alkenyl, alkynyl, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclyloxyalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonylalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonylalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonylalkyl, aminoalkyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

270. (original) A compound or salt thereof according to claim 269, wherein the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^2$  (270-1).

271. (original) A compound or salt thereof according to claim 270, wherein the compound corresponds in structure to the following formula:

272. (original) A compound or salt thereof according to claim 269, wherein the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^2$   $Z^4$   $Z^2$  (272-1).

273. (original) A compound or salt thereof according to claim 272, wherein R<sup>x</sup> is selected from the group consisting of alkyl, alkynyl, aminoalkyl, cycloalkyl, aryl, cycloalkylalkyl, wherein:

any member of such group optionally is substituted with one or more independently selected halogen, and

the nitrogen of the aminoalkyl optionally is substituted by up to 2 independently selected alkyl.

274. (original) A compound or salt thereof according to claim 273, wherein R<sup>X</sup> is aryl.

275. (original) A compound or salt thereof according to claim 274, wherein the compound corresponds in structure to the following formula:

276. (original) A compound or salt thereof according to claim 273, wherein R<sup>x</sup> is selected from the group consisting of haloalkyl, alkynyl, aminoalkyl, cycloalkyl, and cycloalkylalkyl, wherein:

the nitrogen of the aminoalkyl is optionally substituted by 2 independently selected alkyl.

277. (original) A compound or salt thereof according to claim 276, wherein the compound corresponds in structure to a formula selected from the group consisting of:

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### 278. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to a formula selected from the group consisting of:

HO N HO N HO N HO N HO N HO N 
$$\mathbb{Z}^1$$
  $\mathbb{Z}^2$  and  $\mathbb{Z}^2$   $\mathbb{Z}^2$   $\mathbb{Z}^2$   $\mathbb{Z}^3$   $\mathbb{Z}^4$   $\mathbb{Z}^2$   $\mathbb{Z}^2$   $\mathbb{Z}^3$   $\mathbb{Z}^4$   $\mathbb{Z}^2$   $\mathbb{Z}^2$   $\mathbb{Z}^3$   $\mathbb{Z}^3$   $\mathbb{Z}^4$   $\mathbb{Z}^2$   $\mathbb{Z}^2$   $\mathbb{Z}^2$   $\mathbb{Z}^3$   $\mathbb{Z$ 

 $R^{x}$  is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl,  $R^{a}$ -oxyalkyl, alkylsulfonyl,  $R^{a}R^{a}$ -aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

 $E^2$  is selected from the group consisting of: -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and  $E^3$  is haloalkyl; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

279. (original) A compound or salt thereof according to claim 278, wherein the compound corresponds in structure to a formula selected from the group consisting of:

HO 
$$_{\rm H}$$
  $_{\rm CH_3}$   $_{\rm CH_3}$ 

280. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the a formula selected from the group consisting of:

HO N 
$$\frac{z^1}{H}$$
  $\frac{z^1}{L^2}$   $\frac{z^2}{L^4}$   $\frac{z^2}{CH_3}$   $\frac{z^3}{L^4}$   $\frac{z^2}{CH_3}$   $\frac{z^3}{L^4}$   $\frac{z^4}{CH_3}$   $\frac{z^4}{L^4}$   $\frac{z^4}{L^4}$ 

HO 
$$\frac{1}{H}$$
  $\frac{1}{H}$   $\frac{1}{2^{1}}$   $\frac{1}{2^{2}}$   $\frac{1}{2^{1}}$   $\frac{1}{2^{2}}$   $\frac{1}{2^{1}}$   $\frac{1}{2^{2}}$   $\frac{1}{2^{1}}$   $\frac{1}{2^{2}}$   $\frac{1}{2^{1}}$   $\frac{1}{2^{2}}$   $\frac{1}{$ 

 $R^{X}$  is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl,  $R^{a}$ -oxyalkyl, alkylsulfonyl,  $R^{a}R^{a}$ -aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

281. (original) A compound or salt thereof according to claim 280, wherein the compound corresponds in structure to a formula selected from the group consisting of:

the compound corresponds in structure to the a formula selected from the group consisting of:

HO 
$$_{H}$$
  $_{X}$   $_{Z^{3}}$   $_{Z^{4}}$   $_{CH_{3}}$   $_{X}$   $_{Z^{3}}$   $_{Z^{4}}$   $_{CH_{3}}$   $_{Z^{4}}$   $_{Z^$ 

282. (original) A compound or salt thereof according to claim 281, wherein the compound corresponds in structure to a formula selected from the group consisting of:

283. (original) A compound or salt thereof according to claim 282, wherein the compound corresponds in structure to the following formula:

284. **(original)** A compound or salt thereof according to claim 282, wherein the compound corresponds in structure to the following formula:

285. (original) A compound or salt thereof according to claim 282, wherein the compound corresponds in structure to the following formula:

286. (original) A compound or salt thereof according to claim 282, wherein the compound corresponds in structure to the following formula:

287. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to a formula selected from the group consisting of:

HO N HO N HO N HO N 
$$Z^1$$
 and  $Z^2$   $Z^3$   $Z^4$   $Z^2$   $Z^3$   $Z^4$   $Z^4$   $Z^4$   $Z^4$   $Z^4$   $Z^4$   $Z^5$   $Z^6$   $Z^8$   $Z^8$   $Z^8$   $Z^8$   $Z^8$   $Z^8$   $Z^8$ 

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, cycloalkylalkyl, carbocyclylsulfonyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclyloxyalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfonylalkyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

288. (original) A compound or salt thereof according to claim 287, wherein the compound corresponds in structure to the following formula:

289. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $Z^1$   $Z^2$   $Z^3$   $Z^4$   $Z^2$  (289-1); and

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents, or

 $A^1$  and  $A^2$  are independently selected as follows:

A¹ is selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkylthio, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3  $independently \ selected \ R^{\chi} \ substituents, \ and$ 

A<sup>2</sup> is selected from the group consisting of alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkylthio, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylalkynyl, heterocyclylalkoxyalkyl, heterocyclylalkylthio, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected R<sup>X</sup> substituents; and

each R<sup>X</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

 $E^2 \text{ is selected from the group consisting of: -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R^a)-, -C(O)-N(R^a)-, -N(R^a)-C(O)-, -C(O)-N(R^a)-N(R^a)-C(O)-, -S-, -S(O)-, -S(O)_2-, -N(R^a)-S(O)_2-, -S(O)_2-N(R^a)-, -O-S(O)_2-, -S(O)_2-O-, -C(NH)-, and -C(NOH)-; and}$ 

E<sup>3</sup> comprises greater than 3 carbon atoms; and

E<sup>3</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and

 $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

290. **(original)** A compound or salt thereof according to claim 289, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^2$   $Z^2$   $Z^2$   $Z^4$   $Z^2$  (290-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

291. (original) A compound or salt thereof according to claim 290, wherein -E<sup>2</sup>-E<sup>3</sup> is alkoxy.

292. (original) A compound or salt thereof according to claim 291, wherein the compound corresponds in structure to a formula selected from the group consisting of:

293. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $Z^1$   $Z^2$   $Z^3$   $Z^4$  (293-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected as follows:

A<sup>1</sup> is selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkylthio, carbocyclylalkyl, carbocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkynyl, heterocyclylalkynyl,

heterocyclylalkylthio, heterocyclylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3  $independently \ selected \ R^{\chi} \ substituents, \ and$ 

A<sup>2</sup> is selected from the group consisting of alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkylthio, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkynyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl; and

E<sup>3</sup> comprises at least 2 carbon atoms; and

E<sup>3</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, alkylsulfonyl, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclyloxyalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$  and  $Z^3$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

 $Z^2$  and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

the alkoxyalkyl, alkylthio, mono-alkylamino, and di-alkylamino optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

the alkyl and alkoxy comprise at least two carbons and/or are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

294. **(original)** A compound or salt thereof according to claim 293, wherein: the compound corresponds in structure to the following formula:

HO N 
$$Z^1$$
  $Z^2$   $Z^3$   $Z^4$  (294-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>X</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted by up to 2 independently selected alkyl.

295. (original) A compound or salt thereof according to claim 294, wherein -E<sup>3</sup> is alkyl.

296. (original) A compound or salt thereof according to claim 295, wherein the compound corresponds in structure to the following formula:

297. (original) A compound or salt thereof according to claim 295, wherein the compound corresponds in structure to the following formula:

298. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

HO N 
$$A^1$$
  $A^2$   $Z^1$   $Z^2$   $Z^3$   $Z^4$   $Z^2$  (298-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\chi}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen and a carbon bonded to hydrogen; and  $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -O-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-O-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is perhaloalkyl and comprises at least two carbon atoms;

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl; and  $Z^1$ ,  $Z^2$ ,  $Z^3$ , and  $Z^4$  are independently selected from the group consisting of hydrogen, halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino.

299. (original) A compound or salt thereof according to claim 298, wherein E<sup>2</sup> is -O-.

300. (original) A compound or salt thereof according to claim 298, wherein E<sup>3</sup> is perfluroalkyl.

301. (original) A compound or salt thereof according to claim 300, wherein the compound corresponds in structure to the following formula:

302. (original) A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$E^2$$
- $E^3$  (302-1); and

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally is substituted with up to 3 independently selected  $R^{\chi}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3  $independently \ selected \ R^X \ substituents; \ and$ 

each R<sup>X</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, Page 188 of 248

alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

 $E^2$  is selected from the group consisting of -C(O)-, -C(O)-O-, -C(O)-N(R<sup>a</sup>)-, -S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-N(R<sup>a</sup>)-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alk

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl,

alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfoxidoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

303. (original) A compound or salt thereof according to claim 302, wherein: the compound corresponds in structure to the following formula:

HO N 
$$E^2$$
- $E^3$  (303-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl.

304. (original) A compound or salt thereof according to claim 303, wherein  $E^2$  is a bond.

305. (original) A compound or salt thereof according to claim 304, wherein the compound corresponds in structure to the following formula:

306. (original) A compound or salt thereof according to claim 304, wherein the compound corresponds in structure to the following formula:

307. **(original)** A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

$$\mathbb{H}^{\mathbb{Q}}$$
 $\mathbb{H}^{\mathbb{Q}}$ 
 $\mathbb{H}^{\mathbb{Q}}$ 

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkenyl, heterocyclylalkynyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\chi}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen and carbon bonded to hydrogen; and  $E^1$  is selected from the group consisting of alkyl and alkenyl, wherein:

the alkyl and alkenyl are optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and E² is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(Ra)-, -C(O)-N(Ra)-, -N(Ra)-C(O)-, -C(O)-N(Ra)-N(Ra)-C(O)-, -N(Ra)-C(O)-, -S-, -S(O)-, -S(O)2-, -N(Ra)-S(O)2-, -S(O)2-N(Ra)-, -O-S(O)2-, -S(O)2-O-, -C(NH)-, and -C(NOH)-; and

E<sup>3</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, aminoalkyl, carbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl,

heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

308. (original) A compound or salt thereof according to claim 307, wherein E<sup>1</sup> is alkenyl.

309. (original) A compound or salt thereof according to claim 308, wherein  $E^2$  is -C(O)-.

310. (original) A compound or salt thereof according to claim 309, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 311. (original) A compound or salt thereof according to claim 308, wherein  $E^2$  is  $-C(O)-N(R^a)-$ .
- 312. (original) A compound or salt thereof according to claim 311, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 313. (original) A compound or salt thereof according to claim 307, wherein E<sup>1</sup> is alkyl.
- 314. (original) A compound or salt thereof according to claim 313, wherein  $E^1$  is methyl.
  - 315. (original) A compound or salt thereof according to claim 313, wherein E<sup>2</sup> is -O-.
- 316. (original) A compound or salt thereof according to claim 315, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

317. (original) A compound or salt thereof according to claim 315, wherein E<sup>3</sup> is selected from the group consisting of alkyl and carbocyclylalkyl, wherein:

the alkyl and carbocyclylalkyl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino, alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino.

- 318. (currently amended) A compound or salt thereof according to claim 317, wherein  $E^3$  is alkyl partially substituted with <u>one or more independently selected</u> halogen.
- 319. (original) A compound or salt thereof according to claim 318, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 320. (original) A compound or salt thereof according to claim 318, wherein E<sup>3</sup> is alkyl substituted with trifluoromethyl.
- 321. (original) A compound or salt thereof according to claim 320, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 322. (original) A compound or salt thereof according to claim 318, wherein E<sup>3</sup> is alkyl comprising a carbon bonded to at least one hydrogen and at least one halogen.
- 323. (original) A compound or salt thereof according to claim 322, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

324. (original) A compound or salt thereof according to claim 317, wherein E<sup>3</sup> is phenylalkyl, wherein:

the phenylalkyl optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino, alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino.

325. (original) A compound or salt thereof according to claim 324, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

326. (original) A compound or salt thereof according to claim 313, wherein E<sup>2</sup> is -C(O)-.

327. (original) A compound or salt thereof according to claim 311, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

328. (original) A compound or salt thereof according to claim 311, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 329. (original) A compound or salt thereof according to claim 313, wherein  $E^2$  is  $-C(O)-N(R^a)-$ .
- 330. (original) A compound or salt thereof according to claim 329, wherein R<sup>a</sup> is selected from the group consisting of hydrogen, methyl, phenyl, and halophenyl.
- 331. (original) A compound or salt thereof according to claim 330, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

332. (original) A compound or salt thereof according to claim 330, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 333. (original) A compound or salt thereof according to claim 313, wherein  $E^2$  is  $-N(R^a)-C(O)$  -.
- 334. (original) A compound or salt thereof according to claim 333, wherein the compound corresponds in structure to the following formula:

- 335. (original) A compound or salt thereof according to claim 313, wherein E<sup>2</sup> is -C(O)-O-.
- 336. (original) A compound or salt thereof according to claim 335, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 337. (original) A compound or salt thereof according to claim 313, wherein  $E^2$  is  $-N(R^a)-C(O)-C(O)-$ .
- 338. (original) A compound or salt thereof according to claim 337, wherein the compound corresponds in structure to the following formula:

339. (original) A compound or a salt thereof, wherein:

the compound corresponds in structure to the following formula:

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkynyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkyl, heterocyclylalkenyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen and carbon bonded to hydrogen; and  $E^3$  is selected from the group consisting of alkenyl and alkynyl, wherein:

the alkenyl and alkynyl optionally are substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

- 340. (original) A compound or salt thereof according to claim 339, wherein E<sup>3</sup> is alkenyl.
- 341. (original) A compound or salt thereof according to claim 340, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

342. (currently amended) A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$A^1 A^2$$
  $Y E^1 - E^2 - E^3$  (342-1);

as to  $A^1$  and  $A^2$ :

 $A^1$  and  $A^2$ , together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{X}}$  substituents, or

A¹ and A² are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylalkenyl, carbocyclylalkylthioalkyl, carbocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected R<sup>X</sup> substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylalkyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of nitrogen and carbon bonded to hydrogen; and  $-E^1-E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(Ra)-, -C(O)-N(Ra)-, -N(Ra)-C(O)-, -C(O)-N(Ra)-, -S(O)-, -S(O)-, -S(O)-, -S(O)-, -N(Ra)-S(O)-, -S(O)-, -S(O)-,

the alkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

E<sup>3</sup> comprises at least 5 carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkoxyalkylthioalkyl, and aminoalkyl, wherein:

## any member of such group comprises at least 5 carbon atoms, and

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkylsulfonyl, and alkoxyalkylaminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

343. (original) A compound or salt thereof according to claim 342, wherein  $E^3$  is  $C_{6}$ - $C_{12}$ -alkyl.

- 344. (original) A compound or salt thereof according to claim 342, wherein  $-E^1-E^2$  is alkyl.
- 345. (original) A compound or salt thereof according to claim 344, wherein -E<sup>1</sup>-E<sup>2</sup> is methyl.
- 346. (original) A compound or salt thereof according to claim 345, wherein the compound corresponds in structure to the following formula:

- 347. (currently amended) A compound or salt thereof according to claim 344, wherein  $E^3$  is alkyl partially substituted with <u>one or more independently selected</u> halogen.
- 348. (original) A compound or salt thereof according to claim 347, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

HO 
$$\frac{1}{H}$$
  $\frac{1}{4}$   $\frac$ 

- 349. (original) A compound or salt thereof according to claim 351, wherein E<sup>3</sup> is carbocyclylalkyl.
- 350. (original) A compound or salt thereof according to claim 349, wherein the compound corresponds in structure to the following formula:

- 351. (original) A compound or salt thereof according to claim 342, wherein -E<sup>1</sup>-E<sup>2</sup> is -O-.
- 352. (original) A compound or salt thereof according to claim 351, wherein the compound corresponds in structure to the following formula:

- 353. (currently amended) A compound or salt thereof according to claim 351, wherein E<sup>3</sup> is alkyl partially substituted with one or more independently selected halogen.
- 354. (original) A compound or salt thereof according to claim 353, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

- 355. (original) A compound or salt thereof according to claim 351, wherein E<sup>3</sup> is selected from the group consisting of alkyl, alkenyl, alkoxyalkyl, and carbocyclylalkyl.
- 356. (original) A compound or salt thereof according to claim 355, wherein the compound corresponds in structure to the following formula:

357. (original) A compound or salt thereof according to claim 355, wherein the compound corresponds in structure to the following formula:

358. (original) A compound or salt thereof according to claim 355 wherein the compound corresponds in structure to the following formula:

359. (currently amended) A compound or salt thereof according to claim 355, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

360. (currently amended) A compound or a salt thereof, wherein: the compound corresponds in structure to the following formula:

HO N 
$$\mathbb{R}^{x}$$
  $\mathbb{E}^{1}$ - $\mathbb{E}^{2}$ - $\mathbb{E}^{3}$   $\mathbb{E}^{1}$ - $\mathbb{E}^{2}$ - $\mathbb{E}^{3}$  (360-1); and

as to  $A^1$  and  $A^2$ :

A<sup>1</sup> and A<sup>2</sup>, together with the carbon to which they are bonded, form heterocyclyl or carbocyclyl, wherein:

the heterocyclyl and carbocyclyl optionally are substituted with up to 3 independently selected  $R^{\mathbf{x}}$  substituents, or

A<sup>1</sup> and A<sup>2</sup> are independently selected from the group consisting of hydrogen, alkyl, alkoxyalkyl, alkylthioalkyl, alkenyl, alkynyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkynyl, carbocyclylalkynyl, carbocyclylalkynyl, carbocyclylalkoxyalkyl, Page 212 of 248

carbocyclylalkylthio, carbocyclylthioalkyl, carbocyclylalkylthioalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkenyl, heterocyclylalkynyl, heterocyclylalkyl, heterocyclylalkylthio, heterocyclylalkylthioalkyl, and heterocyclylalkylthioalkyl, wherein:

any member of such group optionally is substituted with up to 3 independently selected R<sup>X</sup> substituents; and

each R<sup>x</sup> is independently selected from the group consisting of halogen, cyano, hydroxy, nitro, nitroso, oxo, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, R<sup>a</sup>-oxyalkyl, alkenyloxy, alkynyloxy, alkylthio, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-amino, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, R<sup>a</sup>R<sup>a</sup>-aminoalkoxy, R<sup>a</sup>R<sup>a</sup>-aminoalkyl(R<sup>a</sup>)amino, R<sup>a</sup>R<sup>a</sup>-aminosulfonyl, carbocyclyl, carbocyclylakyl, carbocyclyloxy, carbocyclyloxyalkoxy, carbocyclylthio, carbocyclylsulfonyl, heterocyclylalkyl, heterocyclyloxy, heterocyclyloxyalkoxy, heterocyclylthio, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl; and

Y is selected from the group consisting of:

 $E^1$  is  $-E^{1A}-E^{1B}$ ; and

nitrogen, and carbon bonded to hydrogen, and carbon bonded to  $R^x$ ; and

 $E^{1A}$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S(O)-, -S(O)-, -S(O)-, -N(R<sup>a</sup>)-S(O)-, -S(O)-, -S(O)-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>1B</sup> is heterocylcylalkyl optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino; and

 $E^2$  is selected from the group consisting of -O-, -C(O)-, -C(O)-O-, -O-C(O)-, -N(R<sup>a</sup>)-, -C(O)-N(R<sup>a</sup>)-, -N(R<sup>a</sup>)-C(O)-, -C(O)-N(R<sup>a</sup>)-N(R<sup>a</sup>)-C(O)-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>a</sup>)-S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -S(O)<sub>2</sub>-, -C(NH)-, -C(NOH)-, and a bond; and

E<sup>3</sup> is selected from the group consisting of halogen, cyano, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkoxyalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, alkylthioalkyl, arbocyclyl, carbocyclylalkyl, heterocyclyl, and heterocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, hydroxyimino, amino (optionally substituted with up to two substituents independently selected from alkyl and carbocyclylalkyl), alkyl, alkoxy, alkylthio, carbocyclyl, and carbocyclylalkyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, aminocarbonyl, and amino; and

each R<sup>a</sup> is independently selected from the group consisting of hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, bisalkoxyalkyl, alkylthioalkyl, alkylthioalkenyl, alkylsulfoxidoalkyl, alkylsulfonyl, alkylsulfonylalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylalkoxyalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylthioalkyl, carbocyclylsulfoxidoalkyl, carbocyclylsulfonyl, carbocyclylsulfonylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkoxyalkyl, heterocyclylsulfoxidoalkyl, heterocyclylsulfonyl, heterocyclylsulfonylalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, wherein any member of such group optionally is substituted:

on any carbon atom(s) capable of such substitution with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, and imino, and

on any amino nitrogen atom with up to 2 substituents independently selected from the group consisting of alkyl, alkylcarbonyl, carbocyclyl, and carbocyclylalkyl.

361. (original) A compound or salt thereof according to claim 360, wherein the compound corresponds in structure to the following formula:

$$\mathbb{H} O \longrightarrow \mathbb{N}$$

$$\mathbb{H} \longrightarrow \mathbb{N}$$

$$\mathbb{E}^{1} - \mathbb{E}^{2} - \mathbb{E}^{3}$$
 (361-1).

362. (original) A compound or salt thereof according to claim 361, wherein: the compound corresponds in structure to the following formula:

HO N 
$$E^{1}-E^{2}-E^{3}$$
 (362-1); and

A is selected from the group consisting of -O-, -N(H)-, -N(R $^x$ )-, -S-, -S(O)-, and -S(O)<sub>2</sub>-; and

R<sup>x</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, R<sup>a</sup>-oxyalkyl, alkylsulfonyl, R<sup>a</sup>R<sup>a</sup>-aminoalkyl, carbocyclyl, carbocyclylalkyl, carbocyclylsulfonyl, heterocyclyl, heterocyclylalkyl, and heterocyclylsulfonyl, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, amino, carboxy, thiol, sulfo, nitro, nitroso, oxo, thioxo, imino, alkyl, alkoxy, alkoxyalkyl, and alkoxyalkoxy, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen and hydroxy, and

the amino optionally is substituted with up to 2 independently selected alkyl.

363. (original) A compound or salt thereof according to claim 362, wherein E¹ is selected from the group consisting of pyrazinyl-C2-C6-alkyl, pyrimidyl-C2-C6-alkyl, pyridazinyl-C2-C6-alkyl, furanyl-C2-C6-alkyl, thienyl-C2-C6-alkyl, pyrrolyl-C2-C6-alkyl, imidazolyl-C2-C6-alkyl, pyrazolyl-C2-C6-alkyl, triazolyl-C2-C6-alkyl, oxazolyl-C2-C6-alkyl, isoxazolyl-C2-C6-alkyl, thiazolyl-C2-C6-alkyl, isothiazolyl-C2-C6-alkyl, thiazolyl-C2-C6-alkyl, oxathiazolyl-C2-C6-alkyl, oxathiazolyl-C2-C6-alkyl, oxathiazolyl-C2-C6-alkyl, pyridinyl-C2-C6-alkyl, pyridinyl-C2-C6-alkyl, pyridinyl-C2-C6-alkyl, triazinyl-C2-C6-alkyl, tetrazolyl-C2-C6-alkyl, oxazinyl-C2-C6-alkyl, azepinyl-C2-C6-alkyl, diazepinyl-C2-C6-alkyl, pyrazinyl-C1-C5-alkoxy, pyrimidyl-C1-C5-alkoxy, pyridazinyl-C1-C5-alkoxy, furanyl-C1-C5-alkoxy, thienyl-C1-C5-alkoxy, pyrrolyl-C1-C5-alkoxy, imidazolyl-C1-C5-alkoxy, pyrazolyl-C1-C5-alkoxy, isothiazolyl-C1-C5-alkoxy, thiodiazolyl-C1-C5-alkoxy, oxathiazolyl-C1-C5-alkoxy, oxathiazolyl-C1-C5-alkoxy, oxathiazolyl-C1-C5-alkoxy, oxathiazolyl-C1-C5-alkoxy, oxathiazolyl-C1-C5-alkoxy, oxathiazolyl-C1-C5-alkoxy, oxazinyl-C1-C5-alkoxy, oxazinyl-C1-C5-alkoxy, pyridinyl-C1-C5-alkoxy, and diazepinyl-C1-C5-alkoxy, wherein:

each such substituent is optionally substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, amino, mono-alkylamino, di-alkylamino, nitro, nitroso, alkyl, alkoxy, alkoxyalkyl, and alkylthio, wherein:

any member of such group optionally is substituted with one or more substituents independently selected from the group consisting of halogen, hydroxy, cyano, carboxy, thiol, sulfo, nitro, nitroso, thioxo, and imino.

364. (original) A compound or salt thereof according to claim 363, wherein E<sup>1</sup> is selected from the group consisting of pyrazinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, pyrimidinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, pyridazinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, furanyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, thienyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, pyrrolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, imidazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, pyrazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, triazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, oxazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, isothiazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, thiodiazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, oxathiazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, oxathiazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, pyranyl-C<sub>3</sub>-C<sub>4</sub>-alkyl,

pyridinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, triazinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, tetrazolyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, oxazinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, azepinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, diazepinyl-C<sub>3</sub>-C<sub>4</sub>-alkyl, pyrazinyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, pyrimidinyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, pyridazinyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, furanyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, thienyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy pyrrolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, imidazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, pyrazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, triazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, oxazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, isoxazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, thiazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, isothiazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, oxathiazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, oxathiazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, oxathiazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, triazinyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, tetrazolyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, oxazinyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, azepinyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy, and diazepinyl-C<sub>2</sub>-C<sub>3</sub>-alkoxy.

- 365. (original) A compound or salt thereof according to claim 363, wherein  $E^2$  is a bond.
- 366. (original) A compound or salt thereof according to claim 365, wherein  $E^1$  is selected from the group consisting of oxadiazolyl- $C_3$ - $C_4$ -alkyl, tetrazolyl- $C_3$ - $C_4$ -alkyl, oxadiazolyl- $C_2$ - $C_3$ -alkoxy, and tetrazolyl- $C_2$ - $C_3$ -alkoxy.
- 367. (original) A compound or salt thereof according to claim 366, wherein the compound corresponds in structure to a formula selected from the group consisting of the following:

368. (original) A compound or salt thereof according to claim 366, wherein the compound corresponds in structure to the following formula:

369. **(original)** A method for treating a condition associated with pathological matrix metalloprotease activity in a mammal, wherein:

the method comprises administering a compound or a pharmaceutically acceptable salt thereof in a therapeutically-effective amount to the mammal; and

the compound is selected from the group of compounds recited in claims 1, 43, 95, 126, 139, 149, 154, 171, 209, 223, 227, 232, 235, 239, 243, 248, 269, 278, 280, 287, 289, 293, 298, 302, 307, 339, 342, and 360.

370. (original) A method for treating a pathological condition associated with pathological TNF- $\alpha$  convertase activity in a mammal, wherein:

the method comprises administering a compound or a pharmaceutically acceptable salt thereof in a therapeutically-effective amount to the mammal; and

the compound is selected from the group of compounds recited in claims 1, 43, 95, 126, 139, 149, 154, 171, 209, 223, 227, 232, 235, 239, 243, 248, 269, 278, 280, 287, 289, 293, 298, 302, 307, 339, 342, and 360.

371. (original) A method for treating a pathological condition associated with pathological aggrecanase activity in a mammal, wherein:

the method comprises administering a compound or a pharmaceutically acceptable salt thereof in a therapeutically-effective amount to the mammal; and

the compound is selected from the group of compounds recited in claims 1, 43, 95, 126, 139, 149, 154, 171, 209, 223, 227, 232, 235, 239, 243, 248, 269, 278, 280, 287, 289, 293, 298, 302, 307, 339, 342, and 360.

372. (original) A method for treating a pathological condition in a mammal, wherein: the method comprises administering a compound or a pharmaceutically acceptable salt thereof in a therapeutically-effective amount to the mammal; and

the compound is selected from the group of compounds recited in claims 1, 43, 95, 126, 139, 149, 154, 171, 209, 223, 227, 232, 235, 239, 243, 248, 269, 278, 280, 287, 289, 293, 298, 302, 307, 339, 342, and 360; and

the pathological condition is selected from the group consisting of tissue destruction, a fibrotic disease, matrix weakening, defective injury repair, a cardiovascular disease, a pulmonary disease, a kidney disease, a liver disease, an ophthalmologic disease, and a central nervous system disease.

373. (original) A method for treating a pathological condition in a mammal, wherein: the method comprises administering a compound or a pharmaceutically acceptable salt thereof in a therapeutically-effective amount to the mammal; and

the compound is selected from the group of compounds recited in claims 1, 43, 95, 126, 139, 149, 154, 171, 209, 223, 227, 232, 235, 239, 243, 248, 269, 278, 280, 287, 289, 293, 298, 302, 307, 339, 342, and 360; and

the pathological condition is selected from the group consisting of osteoarthritis, rheumatoid arthritis, septic arthritis, tumor invasion, tumor metastasis, tumor angiogenesis, a decubitis ulcer, a gastric ulcer, a corneal ulcer, periodontal disease, liver cirrhosis, fibrotic lung disease, otosclerosis, atherosclerosis, multiple sclerosis, dilated cardiomyopathy, epidermal ulceration, epidermolysis bullosa, aortic aneurysm, defective injury repair, an adhesion, scarring, congestive heart failure, post myocardial infarction, coronary thrombosis, emphysema, proteinuria, Alzheimer's disease, bone disease, and chronic obstructive pulmonary disease.

374. (original) A pharmaceutical composition comprising a therapeutically-effective amount of a compound or a pharmaceutically-acceptable salt thereof, wherein the compound is selected from the group of compounds recited in claims 1, 43, 95, 126, 139, 149, 154, 171, 209, 223, 227, 232, 235, 239, 243, 248, 269, 278, 280, 287, 289, 293, 298, 302, 307, 339, 342, and 360.